

Date: Wed, 20 Apr 94 04:30:29 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #100
To: Ham-Space

Ham-Space Digest Wed, 20 Apr 94 Volume 94 : Issue 100

Today's Topics:

 Meteor scatter software V4.2 de OH5IY
 Satellite Receive Dishes Combined in Phase Array

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 19 Apr 1994 16:30:32 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!howland.reston.ans.net!pipex!sunic!
news.funet.fi!nntp.hut.fi!vipunen.hut.fi!jsi@network.ucsd.edu
Subject: Meteor scatter software V4.2 de OH5IY
To: ham-space@ucsd.edu

Good news for meteor scatter freaks !

Version 4.2 of OH5IY's meteor scatter software has been released today.
I have uploaded it into ftp.funet.fi: pub/ham/vhf-work/mssoft42.zip.

V4.2 has lots of improvements and changes compared to V4.1. The most
exciting new feature is true, measured activity of major showers. The
graphs show the profile of each shower 96 hrs around the peak. This is
something you really want to lay your hands on !!

Other new features or changes include:

- bar graphics ZHR history for major showers since 1980.
- updated shower data and improved peak calculation algorithms.
- meteor speed correction factor used in computing ant. elevation.

- sidescatter optimum elevations computed.
- day scanning on gradient curves with EGA&VGA.
- single screen shows all numeric gradient data.
- improved text editor and find function in sked-editor.
- improved install and default parameter setting program.
- better error handling.
- mouse control.
- creates \ms and \msdata subdirectories
- installs on any existing subdirectory.
- report can be sent 2 or 3 times on CW.

There are many new features not listed above. See readme42.com to find them all.

If you are using this software, send a message to OH5IY for his records. If you send your packet or e-mail address, you will get the new data files automatically after each shower. OH5IY's e-mail and packet addresses are mentioned in the end of readme42.com.

If you can't ftp but want a copy of the new version, send a formatted 3.5" HD disk with 4 IRCs (or equal amount of USD) inside Europe, 6 IRCs outside Europe, + Self Addressed Envelope (SAE) to Ilkka Yrjola OH5IY, Jukolan tie 16, FIN-45740 Kuusankoski, Finland.

The first copies of the new version will be mailed out this week.

The latest version is always available by anonymous ftp at [ftp.funet.fi](ftp://ftp.funet.fi) (128.214.6.100): `pub/ham/vhf-work/mssof*.zip`. The new versions will be named as `mssof421.zip`, `mssof422.zip`, `mssof423.zip` etc. (Hint: use `pkunzip -d` to open the .zip file). In future look also for `msdata94.zip`, which will contain all new data files. It will be updated after each shower.

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Jukka OH6DD jsi@hut.fi

Date: Tue, 19 Apr 1994 11:59:47 GMT
 From: ncar!csn!boulder!cnsnews!spot.Colorado.EDU!weverka@ames.arpa
 Subject: Satellite Receive Dishes Combined in Phase Array
 To: ham-space@ucsd.edu

In article <1994Apr18.125606.21991@koccrsv01.delcoelect.com>,
 Alan Anderson <anderson@kosepc01.delcoelect.com> wrote:
 >>In <2osk75INN7mv@uwm.edu>, weening@convex.csd.uwm.edu (Richard W Weening):
 >>>
 >>>Is anyone aware of successful methods for combining two or more satellite
 >>>receive dishes in phase array as a means of achieving receive gain

>>>comparable to a single larger dish?

^^^^

>>

>>I've always seen phased antenna arrays used for more precise pointing, not
>>for increased gain. Of course, with a narrower "beam" you GET more gain,
>>so maybe it isn't as unusual an idea as it first seemed....

>>

phased array antennas are commonly used to acheive gain.

In article <CoGLE6.Ju9@ncifcrf.gov>, Joe Mack <mack@ncifcrf.gov> wrote:

> COMbinng antennas into arrays is covered in most texts on antennas. You
>will have to do it at receive frequency and feed the power to a combiner. The
>pointing accuracy needed will be approx that for an antenna with the diam=
>spacing between the two dishes (ie you'll need to be very accurate), while
>the signal will only go up 3bd. This is great for radia astronomy where you
>want to know exactly where your source is. However you just want more
>signal, in which case it will be easier to buy a bigger dish.

>

You don't have to point the individual antennas in an array any better than
you would have to point them by them selves. You do have to match the line
lengths from the antennas to the power combiner at the higher pointing
accuracy, but this is relatively easy. In fact with a variable line length
you can steer the combined beam anywhere within the main beam of the
single dish.

You don't have to combine the signals at the carrier frequency either, if
the two downconverters are driven by the same local oscilator.

A high frequency power combiner might be cheap than two down converters.

Whether a big dish is easier than a few small dishes, depends on whether
you are more adept at mechanics or electronics, and how often you need
to reposition your dish.

End of Ham-Space Digest V94 #100
